GRUMMAN plane news

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Caporali, Myers elected senior VPs

Five others named VPs

Grumman Aerospace is on the move. A steady business base growth has become the norm in recent years, and the future looks bright. On August 18, Grumman Aerospace President George Skurla announced the elections of two senior vice presidents, five vice presidents and six program vice presidents.

"These appointments reflect our current business requirements," said Skurla. "These are challenging times for Grumman Aerospace, calling for innovative approaches and a new spirit of entrepreneurship. The new appointees will play an important role in meeting today's corporate goals and our business projections."

Among those elected were:

Dr. Renso Caporali, senior vice president-Technical Operations, is responsible for Grumman Aerospace's Research, Engineering, Flight Test and Integrated Logistics Support activities.

He received both his bachelor's degree in civil engineering and his master's degree in mechanical engineering from Clarkson College of Technology. From Princeton University, he earned three degrees: master of aeronautical engineering, master of arts in aeronautical engineering, and Ph.D. in aeronautical engineering.

While serving in the U.S. Navy from 1954 to 1958, Caporali was a pilot with Airborne Early Warning Squadron No. 14. He remained in the active reserve until 1973 when he transferred to the retired reserve.

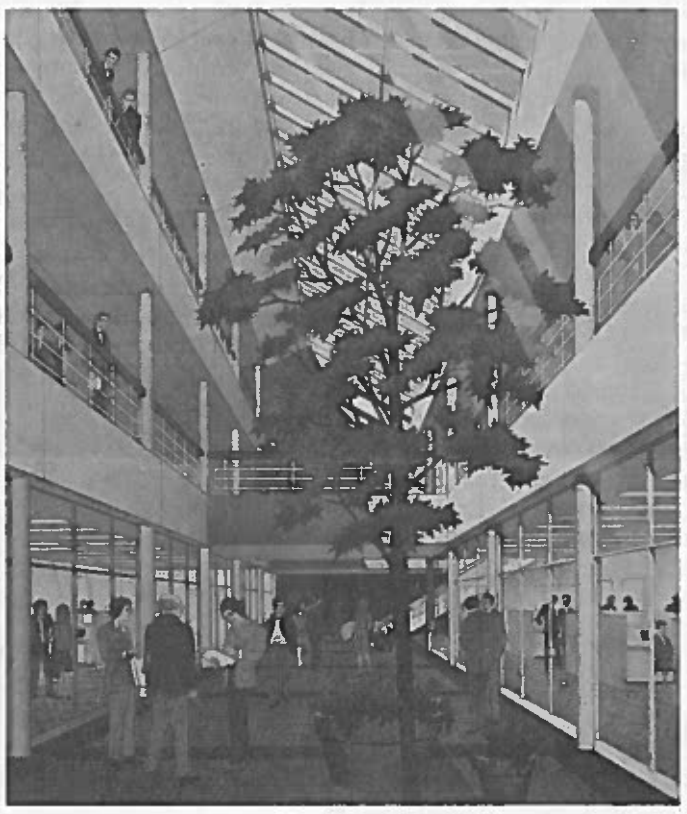
Caporali joined Grumman in 1959 as a structural flight test engineer. It was during this period that he attended Princeton under corporate sponsorship. In 1963, he became assistant to the director of Flight Test for Advanced Development. From 1964 to 1966, he was assistant manager of GFAD vehicle technology, and from 1966 to 1968, he served as an assistant to the vice president-Engineering.

During the next three years, he held positions of responsibility on the F-14 Tomcat program. In 1973, he was appointed director of Design Engineering. After two years in this post, Caporali was appointed director, Advanced USAF tactical aircraft, and then director of Advanced Systems Technology, a post he held until May 1980. At that time, he was elected vice president-Development for Grumman Aerospace.

Bob Myers, senior vice president-Resources, is in charge of Business Operations, Facilities Engineering, and Corporate Systems.

After serving in the U.S. Army from 1955 to 1957 as assistant post engineer, Myers began his Grum-

(Continued on page 4)



Atrium attraction. *The new administration building on Stewart Ave. in Bethpage will feature plenty of natural light, as the architect's rendering (above) plainly shows. When completed in late 1984, the new structure will house about 2,000 employees. (See article on page 9)*

Egyptians sign E-2C contract – pg. 3

Elect Fitzpatrick Grumman Corp. VP - pg. 3

Double the power

Super computer age dawns at Grumman

The Cray-1 supercomputer looks like a small spaceship. Weighing in at a mere five-and-a-half tons, this powerful machine can perform several hundred million calculations per second. It is so fast, its electronic circuitry so dense, that a freon gas coolant must be pumped through it just to keep it from melting down.

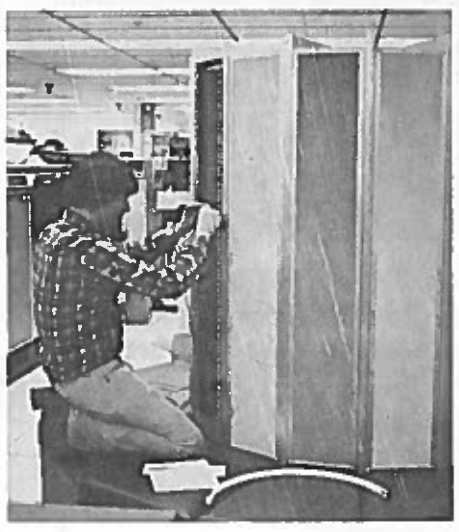
Today, there are only 74 supercomputers operating in the world. In the near future, Grumman Aerospace will join this elite group of supercomputer users. The company has requested that Grumman Data Systems acquire a Cray-1 supercomputer to be used exclusively by the Aerospace engineering and scientific communities. The Cray-1 — one of the world's fastest computers — will be online by the end of November 1983.

Double the power

"The Cray-1 will more than double Grumman's computing power," reports Vice President Tom Kelly, director of Information Resource Management.

Large scale scientific computers or "supercomputers" are the highest performance computers available. For computations involving large amounts of arithmetical operations ("numbercrunchers"), these machines outperform the more widely used general purpose computers such as those which Grumman currently uses.

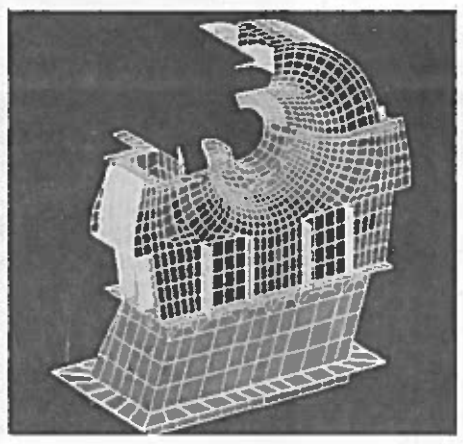
Supercomputers attain their great computational speed primarily because they are designed to process vector or matrix operations. Efficiently, they are also designed to overlap mathematical and arithmetical operations to the maximum extent possible for non-vector operations. As a result, these machines can compute (depending upon the job) between five and 60 times faster than general purpose computers presently being used at Grumman.



'Numbercruncher.' *Technician works on a Cray-1 supercomputer at Grumman Data Systems.*

The search has ended

Over the past two years, Grumman Aerospace's technical community has been evaluating its needs for a large scale scientific computer. "Today, Grumman holds a strong competitive position in engineering and technology development," says Kelly. "However, recent advances in computational analysis have outstripped the capability of our general purpose computers. They cannot realistically handle the large volume of computations needed for advanced scientific/engineering problems."



A snap. *Three-dimensional graphics are easily obtained using the Cray-1 supercomputer.*

Kelly also points out that it has become increasingly difficult for Grumman engineers/scientists to use the advanced technological techniques which the company's competitors and customers use.

Top of the line

"The Cray-1 supercomputer is the de facto standard for scientific computing in the aerospace industry," says Paul Muzio, assistant to the IRM director, Information Processing. "The Cray will allow Grummanites to solve large analytic problems that our competitors and customers can handle, but we cannot on our existing machines.

"In recent years, it has become apparent that the aerospace industry — both private and public sectors — has recognized the need to do extensive computational design work before committing an aircraft design to metal," states Muzio. "The combination of high powered supercomputers with improved computational methods can dramatically result in improved designs at lower cost, increased reliability and higher quality."

Plenty of proof

Grumman engineers proved the merits of computational analysis when they designed the supercritical wing for the Gulfstream III a few years ago. A number of wing designs were conceived and "tested" using these computational techniques. After extensive computational analysis, the design was verified during wind tunnel tests using only one wind tunnel model. In contrast, Grumman built and tested 24 wind tunnel models for the Gulfstream II.

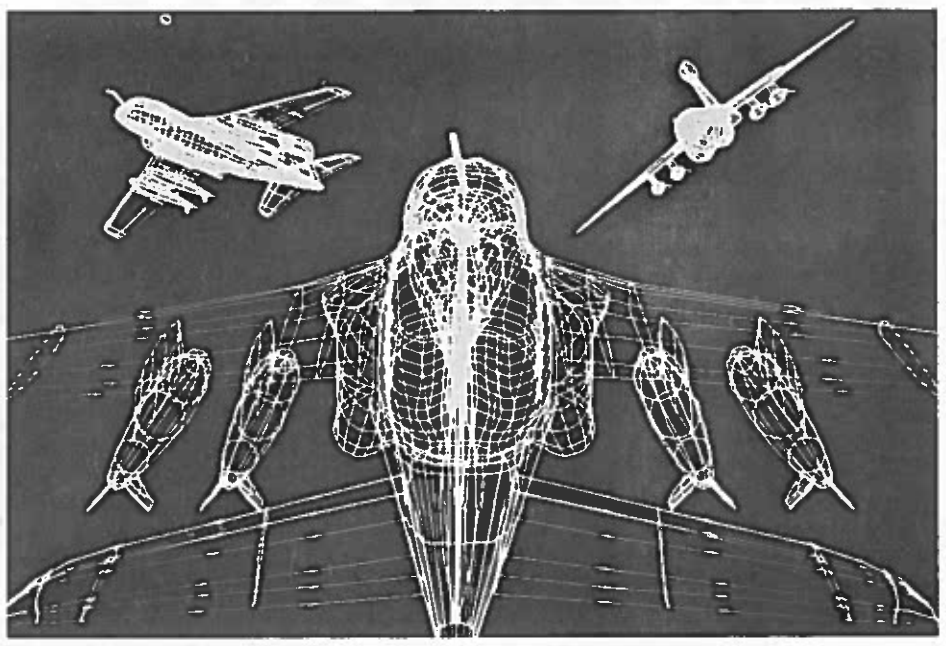
Since June 1982, Grumman has been acquiring time on the University of Minnesota's Cray-1 supercomputer. The company has already begun reaping the rewards of using the services of a superduper "numbercruncher".

For example, Grumman engineers are developing wing designs for an advanced fighter using the Cray-1. Aerodynamics section engineers are running the Jameson full potential theory code to do this work on the Cray-1. "Typically, this code used 60 minutes of central processor units (CPU) time on our present computers," says Muzio. "It was turned around in one to two days at a cost of $1,800 per run.

"On the Cray-1, the job takes about three minutes, and is turned around in about 10 minutes at a cost of about $125 per run."

Kelly sees the Cray-1 supercomputer as a "powerful tool for Grumman engineers and scientists." Initially, about 40 Grummanites will be using the Cray-1. These people are from flight test, aerodynamic design, flight test simulation, mission analysis, combat simulation, pattern recognition, flight control simulation and circuit design.

"We've only started to scratch the surface," says Kelly. "We are going to see a very rapid growth in applications for the Cray as more Grummanites become familiar with the supercomputer's capabilities."



Tremendous scope. *Engineers and scientists will be able to conceive and 'test' designs using the Cray-1 supercomputer. The Cray drastically cuts down on computation time for such complex tasks.*

Next issue: Sept. 30

GRUMMAN plane news

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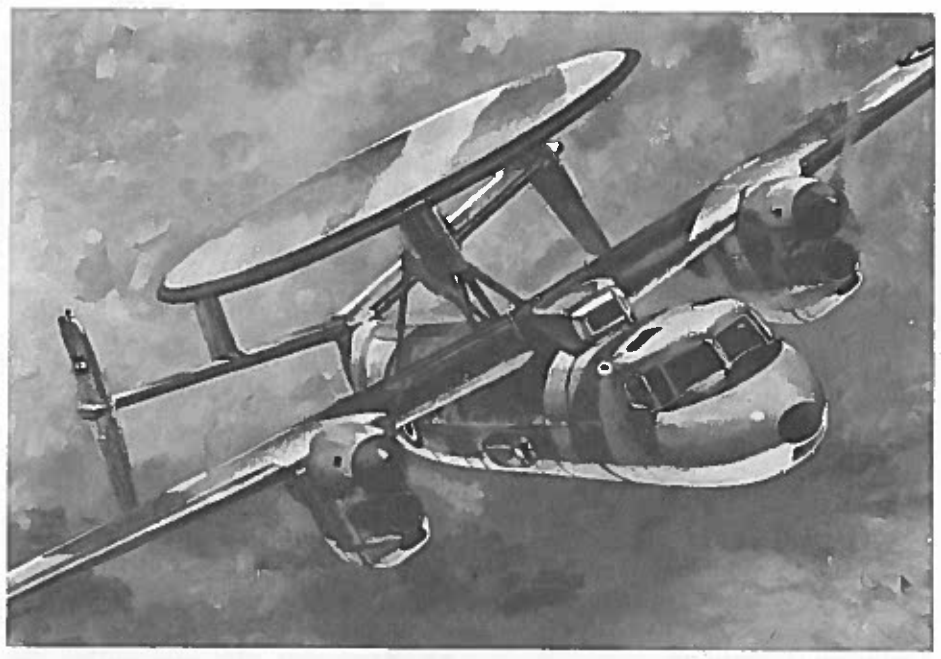


All-seeing Hawkeye. *The Government of Egypt recently signed a $465 million pact to purchase two E-2Cs; included are support/test equipment, spares, training and software conversion for four Hawkeyes. First delivery is scheduled for September 1985.*

Egypt signs pact for two Hawkeyes

The Government of Egypt signed Letters of Offer and Acceptance for $465 million to purchase two Grumman E-2 Hawkeyes on August 15.

Included in this agreement are support/test equipment, spares, training, and software conversion for four E-2Cs. "The Egyptians are expected to sign for two additional E-2Cs in May/June of next year," reports Paul Coco, program manager, E-2C/Egypt.

During the past year, Grumman has been ordering long lead parts and conducting an engineering study under a commercial contract with the Egyptians.

Delivery in 1985

The first Egyptian E-2C early airborne warning aircraft will be "DD-250ed" in September 1985. Flight training will begin at this time in Plant 4.

According to Coco, the training effort for maintenance, software support, and combat information officers will get underway in January 1985. Training will take place in the new administration building now under construction on Stewart Avenue. The Egyptians will also be using the new E-2C lab building behind Plant 14, which is also under construction in Bethpage.

Right now, the main thrust of the program is to convert present Hawkeye software into a new configuration which will be adaptable to the needs of the Egyptian defense forces.

The all-seeing E-2C Hawkeye is slated to be flying over the skies of Egypt in early 1987.

Dollar for dollar

Grumman is increasing its contributions to the Employee Investment Plan from 92 percent to an all-time high of 100 percent for the upcoming fourth quarter of 1983.

From October 1 to December 31, for each dollar an EIP investor contributes to the plan (up to four percent of a member's annual base pay), the company will contribute *one dollar.*

Got your new badge?

Do you still wear your old red Grumman badge? Time is running out. Only the new blue badges will be honored after November 2, 1983.

Those Grummanites who have not changed their badges should stop by the Plant 18 Guard Headquarters building on South Oyster Bay Rd. and have their photo taken. If you have any questions, call Ext. 4184.

'84 scholarship deadline slated for November 1st

Application deadline for entry in the 1984 Grumman Engineering and Science Scholarship competition is November 1, 1983.

Each year, the company awards 12 scholarships — a minimum of three (usually six) go to dependents of Grummanites. These grants cover tuition costs up to a limit of $4,500 annually for a student majoring in an engineering/science field of study within the primary scope of the company's activities.

"The company expects the scholars to honor its investment and commitment by signing a Letter of Intent to accept employment with Grumman upon completion of their college studies," reports Sue Dalva of the Scholarship Program office.

Minimum eligibility for a Grumman scholarship is limited to high school seniors ranking in the upper 20 percent of their class and whose combined math and verbal SAT scores are 1,200 or higher. As dependents of Grummanites, they must have a parent who has been with Grumman a minimum of two years as of November 1, 1983. Dependents of officers of Grumman Corporation and its subsidiaries are not eligible.

Dependents may apply by completing the application form which is now available at all Long Island high school guidance counselors' offices. The form must be endorsed by the student's counselor. Applications must also be accompanied by a principal's report and two letters of recommendation. The entire package should then be forwarded to the Scholarship Office, A10-35, Bethpage, N.Y. 11714, no later than November 1. "No exceptions will be made to the deadline date," says Dalva. "Only those students who meet the minimum requirements will continue in the competition. Applications of students who do not meet these requirements will not be responded to."

Any questions?

If you have any questions about the 1984 Scholarship Program, contact Dalva, Ext. 6173.

Name Fitzpatrick corporate VP

Bob Fitzpatrick has been elected vice president of Product Integrity and Environmental protection for Grumman Corporation. He will be responsible for product quality, reliability and safety, all occupational health and safety programs, and environmental planning and control. Fitzpatrick, who joined Grumman in 1946, had been director of Quality and Safety since 1974.

Aluminum expertise

Fitzpatrick's career began with the Grumman Aircraft Engineering Corporation as a manufacturing engineer. He worked with tooling and process developments including those associated with aluminum products such as the Grumman canoe and the Olson line of truck bodies.

In 1959, while serving as administrative engineer for the manufacturing engineering department, he was named departmental administrator for the newly established Service and Product Support department. This led to his appointment as associate director of Quality Control in 1963, when he assumed responsibility for Quality Engineering, Supplier Control, and Systems and Procedures as well as being deputy department head.

Bob Fitzpatrick

Fitzpatrick became director of Quality Control in 1966 and held the post until 1974 when he was appointed director of Quality and Safety for Grumman Corporation. His responsibilities broadened to include environmental protection along with product quality and occupational safety for all of the Grumman companies.

Mechanical engineer

He is a graduate of Rensselaer Polytechnic Institute where he earned a bachelor's degree in mechanical engineering. He is also an alumnus of the Harvard Business School's advanced management program. During World War II he served in the U.S. Army Air Force, attaining the rank of first lieutenant.

Aerospace elects two senior VPs, five VPs

(Continued from page 1)

man career as an administrator in the Engineering department. He left Grumman in 1961 to become division controller-administrator for Giannini Controls Corp. and returned three years later to be program control manager for the Lunar Module program.

From 1968 to 1969, Myers was Corporate Planning, Control and Budgets manager for Resource Planning. He was then named program control manager for the F-14 in 1969. Four years later, he became deputy director of Planning, Control, and Budgets. In 1975, he succeeded to the directorship of that department and held that post until 1978 when he was appointed deputy director for Business Operations. In 1979, Myers became director of Administration and Resources. In May 1980, he was elected vice president of Resources for Grumman Aerospace.

Dr. Renso Caporali

Bob Myers

Myers earned a B.S. in civil engineering from New York University; he later attended NYU's graduate school where he completed all courses towards an MBA degree. He also completed the Program for Management Development at the Harvard Business School in 1972.

Joe Kingfield, vice president of Quality and Safety Operations, is in charge of Quality Assurance, Quality Operations, Quality-Procured Materials, and Industrial Safety and Hygiene.

After serving in the U.S. Navy during World War II, Kingfield was a civilian employee of the U.S. Air Force from 1947 to 1958. His last assignment was assistant to the chief of Air Force Quality Control at Republic Aviation.

Kingfield started his Grumman career in 1958 as manager of the Quality Control Systems and Procedures group. Through the ensuing years, he has held positions of increasing responsibility in Grumman's Quality organization. From 1962 to 1972, he served as quality manager of the Lunar Module Program.

In 1972, he was named deputy director of Quality Control; two years later, he assumed the position of director, Corporate Quality and Safety Operations.

Kingfield has completed numerous senior management development training programs including an executive program at Cornell University's Graduate School of Business. A senior member of the American Society of Quality Control, he is a past chairman of the Aerospace Industries Association (AIA) — Quality Assurance Committee and is currently a member of its Steering Committee.

Caporali, Myers and Kingfield report directly to Grumman Aerospace President George Skurla.

Will Bischoff, vice president and chief engineer, is responsible for System and Vehicle Engineering. In addition, he is deputy director of Technical Operations.

Bischoff has a long association with aircraft, spacecraft and major design programs at Grumman. After completion of the Cornell University Executive Development Program, he was appointed department head of Engineering in 1981. For the previous six years, he was director of Design Engineering within the Engineering department. While in that post, he was responsible for all design activities throughout the company. In 1972, Bischoff completed the Polytechnic Institute of Brooklyn's Executive Technical Development Program.

Previous assignments included engineering manager on the Shuttle Wing; LM assistant program director for engineering; and numerous other design engineering positions.

He joined Grumman in 1948 after graduating from Spartan College of Aeronautical Engineering; Bischoff spent his first year in the Prototype Shop in Plant 5. After seven years of attending night classes, he graduated from New York University in 1958 with a bachelor of mechanical engineering degree.

Dr. Dick Scheuing, vice president of Research, is in charge of the Grumman Aerospace Research and Development Center. He is responsible for the entire spectrum of research and exploratory development activity providing new technology and concepts necessary to the successful development of new products and supporting ongoing company programs.

Since 1977, Scheuing has been director of Research for the company. From 1961 to 1977, he served as deputy director of Research. As head of Fluid Mechanics Research (1956 to 1970), he was responsible for a wide range of efforts in aerodynamics and high energy gas dynamics with special focus on the major technical issues of the Lunar Module. During his early career at Grumman, Scheuing was a Research scientist.

A member of the first class of Grumman scholars, he graduated from Massachusetts Institute of Technology in 1947 with a degree in aeronautical engineering. A year later, he obtained his M.S. from MIT in aeronautical engineering. In 1971, he received his Ph.D. from New York University in aeronautics and astronautics. He also completed the Harvard University Advanced Management Program in 1982.

Both Will Bischoff and Dick Scheuing report to Renso Caporali, Senior Vice President of Technical Operations.

Herb Grossman, vice president of Bethpage Operations, is responsible for Bethpage, Machine Operations and the Product Development Operations Center in Plant 5. In addition, he retains his position of deputy director for Manufacturing.

Grossman worked for Sperry Gyroscope as a field systems engineer after completing his tour in the U.S. Army. He joined Grumman in 1963 to work on the Lunar Module program. Grossman was responsible for systems integration of the LM design and later chief

Joe Kingfield

Will Bischoff

Dr. Dick Scheuing

Herb Grossman

Dan Collins

Harvey Fromer

Vern Kramer

Program news update

Six named program vice presidents

engineer at the Kennedy Space Center through the lunar landing. In 1972, he was appointed chief engineer for Calverton Aircraft Operations.

Three years later, Grossman became the first general manager of the newly formed Product Development Center in Plant 5. In 1980, he was named general manager of Bethpage Operations and deputy director of Manufacturing. Prior to that assignment he was assistant to Grumman Aerospace President George Skurla.

Grossman graduated from New York University in 1955 with a bachelor's degree in mathematics. He subsequently completed additional electronic courses at George Washington University, the University of Virginia and the University of Utah.

Al Verderosa, is the vice president of Grumman Aerospace's Aircraft and Marine Programs.

After a two-year stint in the U.S. Army Corps of Engineers, Verderosa began his Grumman career in 1956 as an electronics engineer. In 1960, he was named assistant project engineer for the HU-16. Four years later, he became project engineer for the S-2 Shedlight program.

From 1967-70, he served as assistant sub-systems project engineer on the EA-6B program. Throughout the Seventies, Verderosa was involved with the E-2C Hawkeye. From 1970 to 1973, he was assistant program manager for the E-2C; he then became program manager in 1973. From 1976 through 1980, he directed the E-2C/C-2/M161 Hydrofoil programs. During the next two years, Verderosa served as deputy director of Aircraft and Marine Programs. In 1982, he was named director.

Verderosa graduated from Long Island University with a B.S. in engineering management. He also attended the Cornell University's executive M.B.A. school.

The new vice president reports to Pete Oram, Senior Vice President.

On August 18, the Grumman Corporation board of directors approved the establishment of a new officer title — Program Vice President. This title is applied to all incumbents of the positions heading the major Grumman Aerospace programs.

The following appointees report to Senior Vice President Pete Oram:

Dan Collins, A-6 program vice president, has been involved with the A-6 Intruder since its inception in 1958. In 1956, he started at Grumman in Avionics and went on to numerous project engineering positions. He was appointed A-6 Engineering manager in 1967 and program deputy director in 1971. Seven years later, he was named A-6 program director.

Harvey Fromer, C-2 program vice president, has accumulated 18 years of experience in all aspects of the defense procurement process. After joining the company in 1965, he held numerous engineering and management positions on major aircraft and space programs. After serving as director of Training Systems, he was named C-2A program director in 1981.

Vern Kramer, EF-111 program vice president, has been associated with the electronic warfare field for many years. After 27 years of service in the Marine Corps, he joined Grumman as assistant program manager, A-6C TRIM program, in 1968. Two years later, he was named program manager of that program and the A-6E TRAM weapons system. In 1976, he was named A-6 deputy director, and a year later, director of the EF-111A program.

Dan O'Neill, EA-6B program vice president, started his Grumman career in 1952. After numerous engineering and management assignments on the S-2, F-11, F-9, E-2, and A-6 programs, he joined the Prowler team as the Integrated Logistics Support manager in 1965. Five years later, he was named EA-6B program manager. In 1978, he became program director of the EA-6B.

Jim Philbin, E-2C program vice president, joined Grumman as an experimental test pilot after serving as naval aviator and aircraft commander in the Navy. As project pilot, he flew the E-2C on its first flight in 1971. Later that year he joined the program management team as assistant E-2C director. He was managing director of Israeli Operations, director-Flight Readiness, and became E2/C2 program director in November 1979.

Pete Remington, F-14 program vice president, joined Grumman in 1964 after a distinguished career in the Marine Corps as a fighter pilot. Previous program management positions included program directorships of the A-6 and the EA-6A programs. In 1979, he was named F-14 Tomcat program director.

Al Verderosa

Dan O'Neill

Jim Philbin

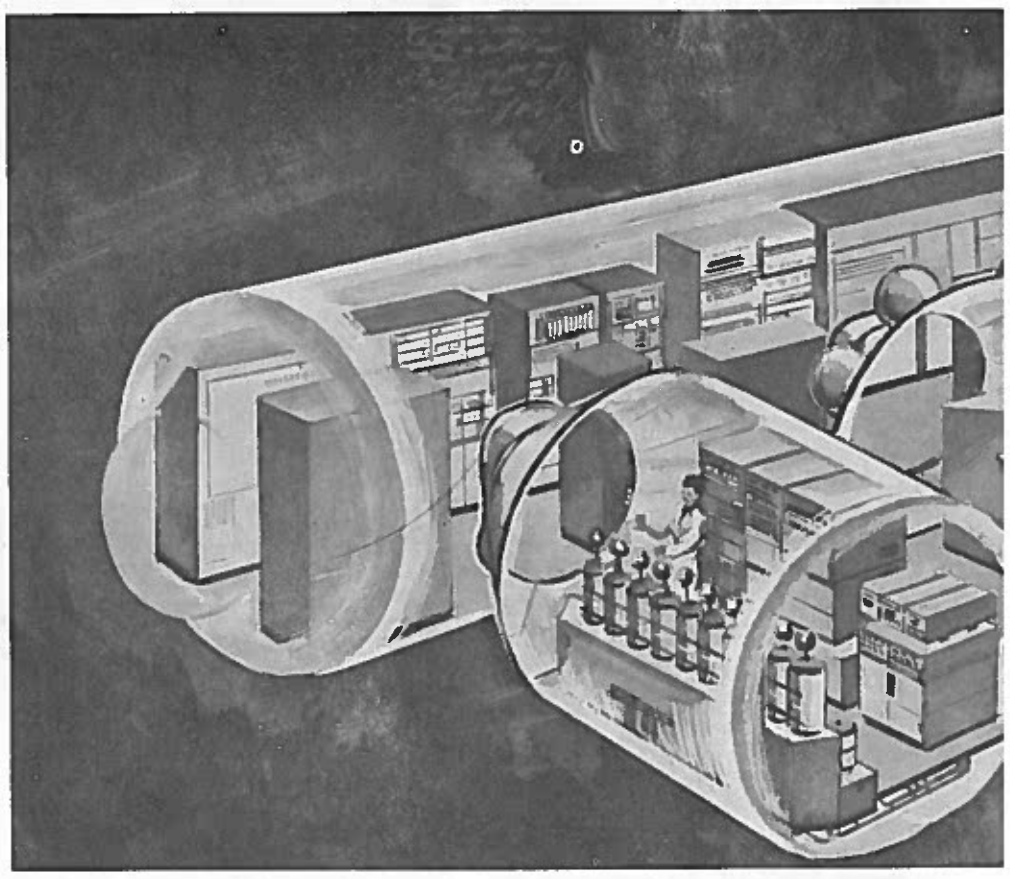
Pete Remington

Novel GAC program will test the c

Sometime before the year 2000, computer chips, medicines, and a host of other substances vital to everyday life could well be manufactured in space.

Sound farfetched? Well then, take a look at a futuristic new program at Grumman Aerospace called Space Station Utilization. Through the program, Grumman is aggressively promoting the concept of space commercialization — having private industry conduct experiments and manufacturing processes aboard the Space Shuttle and the proposed Space Station. And the company is playing such a pivotal role in this area that it was recently invited to present its message at the White House.

"Although space commercialization is in its formative stage, where it's too early for anyone to tell for sure which products will be most successful, the business opportunities are real and potentially enormous," said Grumman Aerospace President George M. Skurla at an August 3 White House meeting on commercial space activity. In attendance were President Reagan, members of the White House staff, NASA Director Jim Beggs, and representatives of various other companies. In concluding his remarks, Skurla recommended that the Administration take steps to ensure that a manned Space Station goes into orbit by 1990.

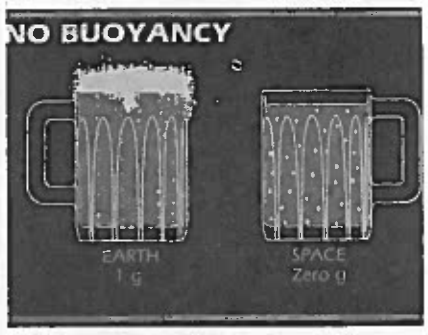


Space factories. *Grumman, along with other companies, is exploring the idea of operating a laboratory and/or manufacturing facility aboard the proposed space station. Above is an artist's rendition of what such a lab may look like.*

A new scientific frontier

Making substances in space is, in many ways, a journey into the unknown, because the Earth-bound laws of physics don't apply. Scientists will have to grapple with two phenomena that will make manufacturing processes very complex: endless vacuum and low gravity.

Louis Hemmerdinger of Grumman's Space Station Utilization program says the latter is the real "unknown element." A vacuum can be created on Earth, but nobody has yet invented a machine or process that neutralizes the force of gravity. Low gravity, he explains, has three crucial effects: no buoyancy/sedimentation, no thermal convective currents, and the possibility of what Hemmerdinger calls "container-less processing."



No "head". *In low gravity, bubbles won't rise to a liquid's surface.*

To explain the no-buoyancy effect, Hemmerdinger likens it to a glass of beer without a head on it. In a low-gravity setting, bubbles in a liquid won't rise to the surface. By the same rule, there's no sedimentation — heavier substances won't fall to the bottom of a lighter substance.

Such an effect could prove to be both a help and a hindrance. For example, in glass manufacturing, bubbles are a flaw. But the presence of different density elements in the same material will produce some very unique properties, Hemmerdinger says, and these are likely to be of some benefit.

The second effect, the lack of thermal convective currents, means there is no "boiling" effect. Water, for example, becomes lighter as it is warmed in a vessel, reaches the surface, and is cooled. Consequently, there it becomes heavier, and falls back to the bottom of the vessel to be warmed over again. The pattern is repeated many times over to produce circulation.

The third property may well pose great potential for industry. On Earth, gravity is the predominant force, while in space, surface tension predominates. A falling drop of water will assume a teardrop shape on Earth, while in space it will form a nearly-perfect sphere.

Substances can likewise be suspended in space and heated or cooled, hence the term "container-less processing." Since there would be no container, a manufacturing process would yield a higher degree of purity.

These combined properties will benefit the metals, semiconductors, pharmaceuticals, and plastics industries. All (save for the pharmaceutical firms) utilize heat to melt or liquify materials and then solidify them for use. It is during this solidification process under low gravity that new materials and properties will become apparent.

Two-pronged effort

Grumman's Space Station Utilization effort actually consists of two distinct projects. First, the company is selling the idea of space commercialization to other companies; significantly, these are all non-aerospace companies.

Through such a sales pitch, Grumman seeks to build a list of potential users of a Space Station laboratory, says Louis Hemmerdinger, manager of the Space Station Utilization program. He and the other program representatives — Research Scientist Dr. Dave Larson and Marketing Director Sam Abraham — have also met with various research institutions.

Grumman is also doing preliminary research-and-development for a space manufacturing venture of its own — the processing of semiconductor and high-strength magnetic metals using an advanced, electronically driven furnace. Hemmerdinger predicts that the company will conduct experiments aboard the Space Shuttle in late 1984 or early 1985. If all goes well, actual production could begin as early as 1986.

The thrust of both efforts is to give Grumman hands-on R&D experience. The desired outcome: a new business producing metals in space and a NASA contract to build the Space Station laboratory.

In the forefront

In Hemmerdinger's view, Grumman is one of two companies in the forefront of space commercialization today — the other is McDonnell Douglas, Grumman's St. Louis-based competitor. To underscore the fact that the concept isn't as improbable as it may seem, he points out that McDonnell Douglas has flown experiments on four shuttle flights. McDonnell Douglas plans to send one of its engineers up on the Shuttle to perform an experiment with an electrophoresis (biological-separation) system. That flight will be STS-12, set for February or March of '84.

While selling space commercialization to others is being done under a NASA contract, the Space Station Commercial User Development Study, Grumman's proposed metals processing experiment is presently being researched on GAC's own funds. A business-opportunity analysis, handled by Bruno Maiolo of Operations Analysis, is now under way to determine the idea's

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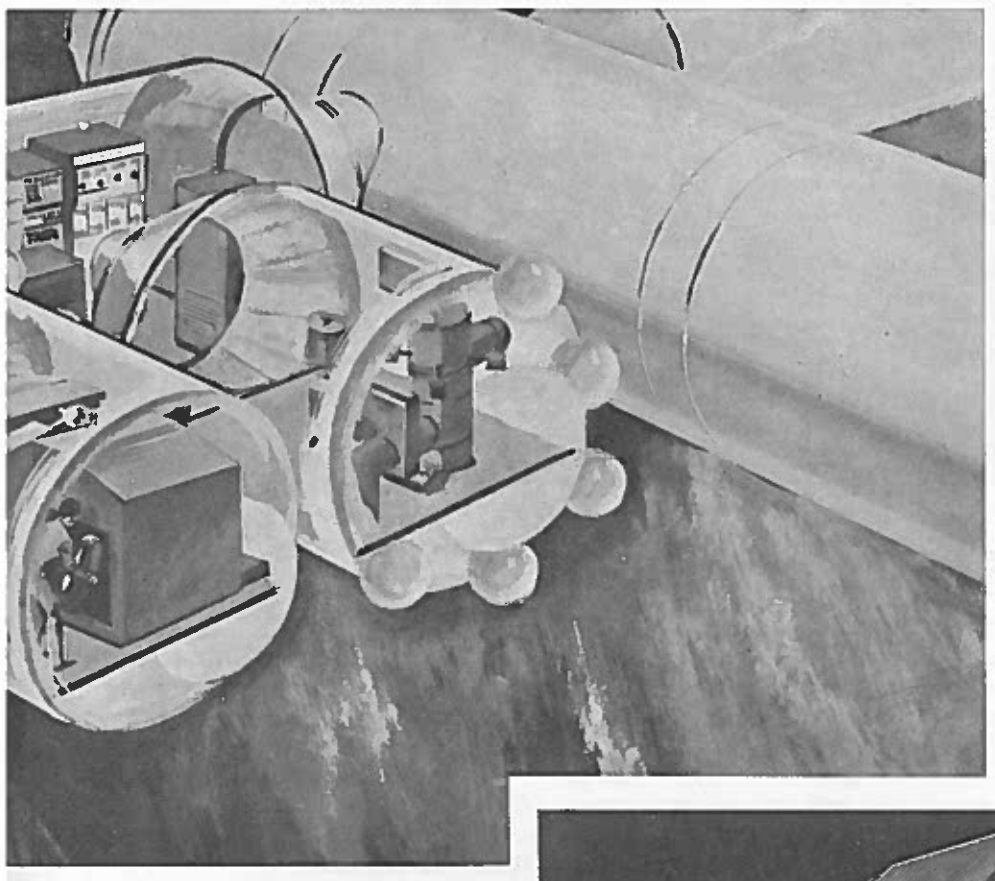


Lifeline. *Any future space station will depend on shuttle flights for needed supplies.*

feasibility. No actual testing has been done so far; the effort is still very much in the conceptual stage. The analysis is scheduled for completion in October.

Small package

The metals produced would be used to make semiconductors for computers (Hemmerdinger asked *Plane News* not to reveal the names of the compounds). In making anything in space, Hemmerdinger says, a company has to choose a material that is very valuable. "So, when we make that material, we can sell it at a very high price in small quantities."

"You can't make a lot of stuff up there [in space]," he explains. "It would be too heavy and you would need too much equipment." Semiconductor materials fit the bill because they are so tiny. There is also an ample supply of computer vendors who will pay a premium to obtain the best product available.

The space furnace selected for the experiments is a prototype designed by the Mellen Company, a small New Hampshire firm. If the experiments receive the go-ahead, the furnace will probably be built by Mellen to Grumman's requirements, then modified for space usage.

The furnace has a big advantage in that, since it is electronically activated, there are no moving parts. It is equipped with water jackets, so cooling is inherent in its design. All an operator has to do is flip a switch to control it.

The furnace operates at an extremely high temperature and is also very small. "It's not a pizza oven," he jokes.

Since the whole notion of producing metals in space is very new, the experiments are somewhat of a gamble. "It may turn out that we set everything up, put the furnace up in space, melt the material, and when we come back, the stuff falls apart," he muses. "It's worthless. So what are we going to do then?"

But Hemmerdinger is confident the venture will be a success, though Grumman will move cautiously, in phases rather than in quantum leaps.

"What we're talking about is getting into a whole new business," he says. "I can't say now that it [the flight experiment] is definite, but I think there's enough momentum and interest that if we show it looks good from a business standpoint, it will be continued."

Hemmerdinger is also counting on NASA to provide free Shuttle transportation — which NASA is already doing for McDonnell Douglas' experiment. He says NASA's financial commitment to a project of this nature could easily total millions of dollars.

On the bandwagon

Grumman's Commercial User Development Study is an outgrowth of an earlier NASA contract. Grumman, along with seven other contractors, took part in the Space Station Needs, Attributes, and Architectural Options Study. During its course, Grumman proposed to NASA that it visit non-aerospace companies to sell the idea of conducting experiments and making new products in space.

Team effort

When the Needs Study was completed, NASA announced the current study and awarded two contracts in April of '83. Grumman's is actually a joint contract with the Big Eight accounting firm of Coopers & Lybrand, which has its own Space Planning Business Group in Washington, D.C. The second contract went to Booz Allen Hamilton, the large, international consulting firm. Both contracts will be completed in January.

The list of those visited by Grumman/Coopers & Lybrand so far reads like a Who's Who list of major companies.

The program team's sales pitch is aided by a slide presentation produced by Grumman's own multimedia center, and is given to executives and research scientists. Hemmerdinger describes the initial presentation as very basic — more technical information is provided by Dr. Larson, whose own experiments have flown on several space flights.

New challenges

Selling space commercialization has benefits for both Grumman and NASA. It gives added impetus to the Space Station, which is still only a proposal.

"If we were to get a lot of major companies on board and say they have been working with Grumman in developing their own space techniques and are interested in doing some work up in space, Grumman will understand their needs and can translate them into a space lab," Hemmerdinger points out. "We, in turn, provide NASA with a constituency of users who are not part of the aerospace industry.

"They're not going to make a profit out of NASA giving out a contract to build the Space Station," he continues. "They're going to want a Space Station to make a profit on their own products, which is what President Reagan has been talking about."

Competition heats up

In addition to McDonnell Douglas, a number of other companies have announced that they want to pursue space commercialization efforts. Among the ones present at the White House meeting last month were John Deere, TRW, Federal Express, Rockwell, and a new company, Orbital Systems Corp.

Hemmerdinger says that McDonnell Douglas' electrophoresis experiments, and the fact that it is working with Johnson & Johnson in this area, make it apparent that McDonnell Douglas wants to go into the pharmaceutical business.

Grumman already has at least one competitor in the metals processing area — a firm by the name of Microgravity Research Associates (MRA). MRA is working on a process called liquid epitaxy whereby it will develop its own semiconductor materials.

Hemmerdinger says the process is above the state of the art.

"Our credit is that we have an existing technology that can be modified for space," he comments. "If we continue to develop it, we'll have a step up on the rest."

Company keeps lid on energy consumption

"Grumman: LILCO Rates Could Force Some Operations Off LI" — *Newsday*, July 15, 1983

"Aid For Grumman Hinted" — *Newsday*, July 27, 1983

"Grumman Gets Low-Cost Power" — *Daily News*, August 4, 1983

The headlines have been big, as big as the electric, gas and oil bills Long Islanders are used to getting. Beyond the Grumman story, all the newspaper, radio and television reports emphasized one point: it costs lots of money to plug in a toaster or a computerized tester on Long Island. In fact, wherever Grummanites call home, energy is expensive. But they have been doing something about the cost.

"Last year, Grumman spent $37 million for energy," points out Bob Fitzpatrick, Grumman Corporation Vice President-Product Integrity and Environmental Protection. Fitzpatrick said that included in that figure is a $23 million bill for electricity. Compare those figures with Grumman's sales and earnings for last year.

In 1982, the company did over $2 billion in sales while recording net earnings of $32.6 million. The cost of energy is significant.

But it wasn't until the oil embargo of 1972 that companies all across the U.S. started thinking about the rising cost of energy. "Prior to that, who worried about the cost of energy?" says Fitzpatrick, who remembers nickel-a-gallon gasoline. The long gas lines caused by the crisis taught everyone a lesson. America had to change its habits. "After the crisis, the federal government put in a scheme in which we had to report our energy cost and consumption."

So Grumman gathered all the paid bills from the oil, gas and electric companies, added the numbers and figured its energy usage. Like all companies in Standard Industrial Classification 37 — the government's category for companies building transportation equipment be it cars, trains or airplanes — Grumman reported energy use in British Thermal Units per square foot of facility. And 1972 became the base year to measure Grumman conservation efforts.

"Since 1972, we've saved the energy equivalent of two million barrels of oil," says Fitzpatrick.

Build we must. *Ground was broken only in July and already workers are pouring concrete for Grumman's $10 million expansion of the Plant 14 Engineering Development Center. Work on the E-2C — dedicated part of the expansion must be finished by next June.*

A decade of decline

Grumman went from consuming 525,000 BTU's per square foot in 1972 to 305,000 BTU's just 10 years later.

Grumman and the companies in SIC 87 pulled out all the stops to cut back on energy consumption in the Seventies. The federal government wanted the companies to reduce energy consumption by 16 percent by 1980. The SIC group as a whole knocked back use per square foot by 29 percent; Grumman nearly doubled the government's target with a 31 percent cut.

While Grumman has cut the percentage of energy used per square foot, total consumption had been rising until last year. But this had been for the right reason — Grumman is growing. There have been major plant expansions in Milledgeville, Georgia; Glen Arm, Maryland; Stuart, Florida; and here on Long Island in the past several years. All this has forced the company to buy more energy, but it goes much farther.

"As the cost of fuel went up, we insulated buildings, put covers on process tanks, put in electricity management systems . . . we did all these things and it paid off," states Fitzpatrick.

Auditing time

Facilities Engineering set up an energy conservation group in the early Seventies. They went through buildings doing energy audits.

The two sets of doors leading to the lobbies of Plant 2 and Plant 3 are just two examples of the conservation group's work. While people go in and out through the second set of doors, heat or cooled air doesn't escape.

Through such efficient use of energy, Grumman has dropped its total energy consumption in 1982. That year, Grumman used 3.07 trillion BTU's; the year before, the total was 3.19 trillion.

Nonetheless, the company had expected to pay some $40 million for all those BTU's in 1982. But, one of the few benefits from the recent recession was lower bills. "We thought LILCO's prices would go up more last year," explains Fitzpatrick, "but its prices dropped because the price of oil dropped."

Conservation will continue to be critical to planning future expansion at Grumman. "As the economy recovers, the cost of energy will go back up," predicts Fitzpatrick.

Read all about it

The *Daily News* broke a story on July 14 of the visit to Grumman by Georgia's Governor Joe Frank Harris, Senator Sam Nunn and a representative of the Georgia Power Company.

"Georgia Trying to Woo Grumman," the front page headline screamed. Georgia, the *News* said, had asked the company to consider moving its entire operation to the state. Grumman never considered such a move, though the Georgians did ask the company to consider expanding current operations there. (Plant 66 in Milledgeville, Georgia, is Grumman Aerospace's composites manufacturing facility).

Grumman did, however, suspend plans to start construction of its new headquarters and administration building in Bethpage. The reason: Long Island Lighting Company is seeking a 56 percent rate increase over three years to pay for its $3.4 billion Shoreham nuclear plant.

Grumman is already projecting a $25 million electric bill for this year. The huge projected increase would put the company in a weak position to bid for future military business.

And the fear of Grumman curtailing its Long Island expansion prompted New York State officials to act. On August 3, Governor Mario Cuomo announced an agreement under which the New York State Power Authority would provide low-cost electricity to Grumman from its Fitzpatrick nuclear plant near Oswego. That agreement, Grumman Corporation Jack Bierwirth announced, prompted the Grumman board of directors to give the go-ahead to the company's construction plans. (See next page)

The problem of how to pay for Shoreham still remains.

obituaries

HENRIETTA J. WALLACE of Support Equip. Prod., Pl. 5, died July 15 at the age of 65. She had been with the company since 1964 and resided at 59 Wadsworth Ave., Levittown.

ROBERT E. RICHTER of Business Mgmt. & Analysis, Pl. 5, died July 16 at the age of 67. He had been with the company since 1963 and resided at 42 Monaton Dr., Huntington Station.

GERARD E. FARLEY of Structure Subs., Pl. 6, died July 27 at the age of 51. He had been with the company since 1954 and resided at 225 N. Forest Ave., Rockville Centre.

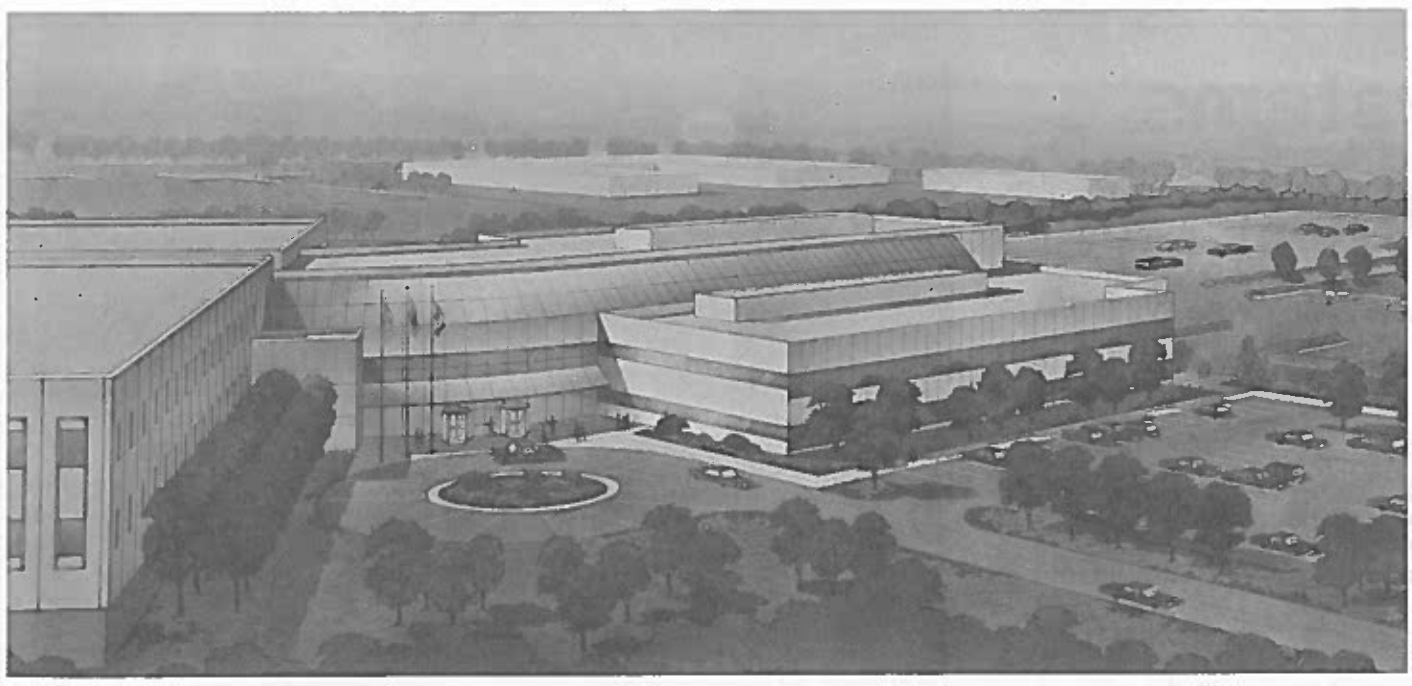
JOHN J. METZGER of Engineering, Pl. 88, died Aug. 1 at the age of 43. He had been with the company since 1962 and resided at 615 Jenny Drive, Newbury Park, Calif. 91320.

WILLIAM ROSS of Subassembly, Pl. 66, died Aug. 1 at the age of 49. He had been with the company since 1969 and resided at 2727 Walnut Creek Rd. #4, Macon, Ga. 31211.

JOHN LINDNER JR., Maint-Facil. Equip & Gen., Pl. 4, died Aug. 2 at the age of 58. He had been with the company since 1966 and resided at 769 So. Hickory St., Lindenhurst.

HARRY LESTER of CH-53E Assembly, Plant 77, died August 15 at the age of 26. He had been with the company since 1980 and resided at 105 E. Tiffany Dr., #3, West Palm Beach, Fla. 33407.

JOHN M. SMILEY of Dassault, Plant 77, died August 15 at the age of 62. He had been with the company since 1981 and resided at 30 Serendipity Dr., Ft. Pierce, Fla. 33450.



Coming attraction. *Here is an architect's rendering of the new administration building now under construction on Stewart Avenue in Bethpage. The present Headquarters building is featured at the far left. Company visitors will enter through an atrium lobby. The two-story and three-story structure pictured will be completed in late summer 1984; the three-story addition (behind Headquarters) will be finished shortly thereafter.*

It's thumbs up for new administration building

Let the sunshine in. That's exactly what's in store for the new administration building which will be located adjacent to the Grumman Corporation Headquarters building on Stewart Avenue in Bethpage.

Ground was broken a few days ago for the new 308,000-square-foot building, which will feature the latest in construction and architectural designs, reports Bill Steenson, president of Paumonock Development Corporation, a corporate subsidiary.

The new structure is basically three pods. A three-story addition will be directly behind the existing headquarters structure. Facing north-south at a slight angle to the present building will be a two-story structure along the road and a three-story section directly behind it.

The three pods will be linked with present headquarters by a common skylit 32-foot wide atrium. Sunlight will beam down from the top floor all the way to the basement. (Correction, make that concourse.)

Bottom up

At the concourse level, the headquarters' buffeteria will take on a new look. Open air dining will be located in the 32-foot atrium. Nearby will be the new 175-seat auditorium.

Also slated for occupancy on the airy concourse level is a Bethpage Federal Credit Union branch office, a floral shop, and an Employee Services (ES) shop. Down the hall will be Corporate Training.

"The new building will allow Grumman to relocate its Corporate Training Department from its leased quarters on New South Road (the old Servo building)," says Steenson. "The company's lease expires in November of next year."

Corporate Training's next-door neighbors will be the Corporate Security Department, which is moving from Plant 18.

At the ground level between the two structures, a three-story atrium lobby will greet all visitors to the Grumman premises.

In addition, the Personnel work force will also set up shop in the new building. That includes everyone from Personnel Administration to Medical to Employment. On the northwest end of the building will be a special lobby for prospective hirees.

Part of the unsecured area of the two-story pod will house the insurance and pension departments; retirees won't have to get processed for a badge. They'll be able to walk in for their appointment with the Pension Department.

Moving into the three-story pod directly behind the headquarters building will be Grumman Aerospace's Resource Information Management group. "This is an ideal location for them because the new telecommunications switching network will be housed there and Grumman Data Systems is a hallway away," says Steenson.

This three-story building will feature a terraced look. Joining Resource Information Management people in this pod will be Grumman Allied Industries officers and Grumman Corporation personnel who are currently working out of Plant 9 in Melville.

Deadlines to meet

"We hope to have all the construction trades' people working inside the building shell by the time the bad weather hits," states Steenson. "The north/south exposure building will be constructed first because our lease ends next year for the Corporate Training building."

Putting up the shell should be a snap. "We are using new steel-insulated panels," says Steenson. "Due to the north/south exposure of the two/three story expansion, the tinted windows on the east and west will be considerably smaller than the windows facing south/north.

Energy efficient

"This will be the most energy efficient of all our office buildings," reports Steenson.

While construction is underway, present headquarters residents will have to put up with a few inconveniences. "At one point in time, there will be a 16-foot moat around two sides of the building," says Steenson. Pointing to the modern-looking 3D model of the new building, he adds, "It will be worth the wait."

Stuart milestone. *Grummanites at Stuart Operations proudly pose in front of the 200th powerplant that they've assembled for the CAMMACORP DC-8 re-engining program. They completed the 200th powerplant right on target, too.*

ATE Systems settled in new home

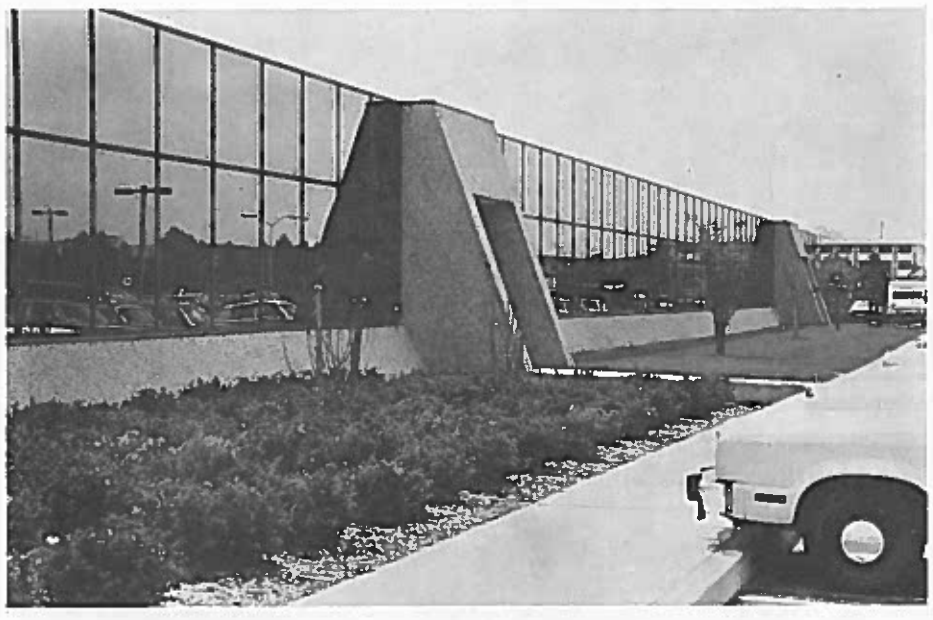
The Grummanites of ATE (Automatic Test Equipment) Systems have all settled into their new home, Plant 106 on Old Sod Farm Rd. in Melville. The new plant is east of Plant 40 across Maxess Rd.

If you're heading for Plant 106 along Rt. 110 go to Bayless Rd., which runs east from Rt. 110 on the south side of the Huntington Quadrangle. Once on Bayless, go to Maxess Rd. and make a left. Then take Maxess to Old Sod Farm Rd. and turn right.

If you're on the LIE going to 106, get off at Exit 49 and take the eastbound service road to Maxess Rd., then head south.

All telephone numbers in Plant 106 are on the 391 exchange. You have to dial 121 first. Call the Grumman operator for the number of the Grummanite you wish to contact.

ATE Systems' previous home, Plant 31, is now home to the Grummanites of the E-2C Hawkeye Software Development Center. On October 1, the E-2C Systems Engineering group will also move there as well as E-2C foreign military customers' representatives. All these groups will remain in Plant 31 until next June, when the new E-2C Systems Engineering and Software Facility at Plant 14 opens.



Nice place! *This is Plant 106, the new home of ATE Systems. The group, which turns out Grumman's line of computerized automatic testers, grew too large for its former home, Plant 31.*

Personals

On behalf of my wife Christine who passed away on July 14, I'd like to say the following to Grumman Aerospace and my co-workers: Perhaps you sang a lovely song or sat quietly in a chair. Perhaps you sent a funeral spray, if so, we saw it there. Perhaps you spoke the kindest words, as any friend could say. Perhaps you were not there at all, just thought of us that day. Whatever you did to console our hearts, we thank you so much whatever the part. The family of Winston Clark

The family of Adrien Robert Doucette sends heartfelt thanks for your messages of sympathy, many generous gifts, offers of help, and attendance at his memorial mass, but most of all for just being his friends and encouraging him with your kindness during this time at Grumman.

I would like to thank all my friends who recently remembered my family and I in the loss of our mother. The floral bouquet of yellow roses and white carnations was one of the most beautiful arrangements we had seen. Your thoughtfulness was greatly appreciated during this time of bereavement. Ron Digi

I wish to express my deepest appreciation to everyone for their expressions of sympathy and kindness during the recent loss of my husband. Dottie Rhodes

My family and I thank Grumman and friends for their expressions of sympathy and support concerning the loss of my father. Joseph Stalk Jr.

On behalf of my family and myself, I would like to thank all our friends at Grumman for their generous gifts, support and expressions of sympathy during the recent death of my brother. Lawrence Horan

We like to thank all our friends and co-workers for their support and sympathy during our recent loss. Ed Schrama and Family

My family wishes to thank our friends and co-workers at Grumman for their kindness and sympathy during the recent loss of my father. Salvatore Palazzolo and Family

My family and I would like to take this opportunity to thank all those who expressed their sympathy over the death of my father, retired Grummanite Nick McCarthy. Eileen Styles

I can't find words to express my warmest feelings to the many Grumman friends and co-workers for their warm expression of sympathy and support during this difficult time. With deepest appreciation, thank you. Betty Richter

Our family wishes to thank all of our many friends and co-workers for their expression of sympathy and kindness during the recent loss of our mother. Tom and Len Trifaro and Family

My family and I wish to thank Grumman and friends for their good wishes during the loss of my father. Ernie Kostner and Family

The Irby family wishes to thank the people of Plant 2, department 007 for making Lydia's first summer with Grumman a memorable one.

I would like to thank all my friends who have made my summer stay at Grumman one to remember. The friendly and comfortable atmosphere made it possible for me to gain experience and knowledge that will certainly aid me in my future endeavors. I offer my sincerest thanks to the entire Grumman family, especially those belonging to department 811 in Plant 25. Julia Ann Sabia

retirees

On behalf of our fellow workers, PLANE NEWS salutes the following men and women for their contributions to the company and wishes them well in their retirement.

Those who retire in September are:

Alex Grumet (35), Edward D. Watts (20), Charles P. Holton (25), William H. Moore (5), Guenter H. Baumann (12), Charles H. Cohen (35), Catherine M. Palombella (18), Eugene H. Garypie (6), Jack Brandi (1), Frederick H. Mensching (25), Helen M. Mandaglio (2), Walter Mattson (76), Ida M. Rucklos (10), Emil E. Donolli (2), Frank C. Farina (3), Frederick A. Caretto (2), Spero C. Kavafes (5), Charles Gennario (3), Wilmur M. McCown (20), Albert A. Fabiano (1), Mildred H. Capobianco (1), Edward H. Clark (40), Harvey M. Jordan Jr. (77), Henry H. Ziermann (2), William J. Bott (9), Charles F. Draudt (30), Alfred C. Pennisi (2), Frank P. Krist (2), William R. Feigel (2), Michael Liccese (1), Thomas B. Street (40).

Carpools

Levittown to Plant 12: 7:30 a.m. - 4:00 p.m. Will pay weekly, J. Lesser, Ext. 5235 or 6911

Flushing, Whitestone, Bayside to Bethpage: want to start or join existing car pool. L. Eskanazy, Ext. 3452

Lindenhurst to Bethpage: 8 a.m. to 4:30 p.m. H. Baker, Ext. 2856 or 957-8301 eves.

Brooklyn (Ocean Parkway) to Bethpage: 8-4:30 p.m. L. Weiss, Ext. 2911 or (212) 376-0067

South Hauppauge (Exit 56 LIE) or Southern State (Islip Ave.) to Plant 30: start or join existing car pool. 8:12 to 4:42 p.m. J. Delgaudio, Ext. 5245

Levittown to Plant 12: ride needed from Hempstead Turnpike 1 block from Time Square stores to New South Rd (plant 12). 7:30 a.m. to 4 p.m. J. Lesser, Ext. 5235/6911 or 735-4607 eves.

calendar

AIAA/ASME: Thurs., Sept. 22, Antun's, 5:30 p.m. Robotics and Artificial Intelligence — Theory and Application. Dinner meeting. Guest speakers will be Prof. E. Kafrissen of N.Y. Institute of Technology and Dr. R. Hong of Grumman Aerospace. Guests welcome. E. Lee, Ext. 9730/S. Winkler, Ext. 4279

Alcoholics Anonymous: every Mon., 4:30 p.m., Pl. 15, conference room C, closed meetings; Personnel Relations, Ext. 3521, Great River meetings: every Wednesday, 4-5 p.m. T. Connolly, Ext. 3521, Calverton: Chemical Dependency Discussion Group, every Mon., 4-5 p.m., Guard Hdq.; open meeting. Personnel, 369-6759, C. Robb. Ext. 117-7038

ASHRAE: Sept. 14, 6 p. m., Linden Tree Restaurant, Bethpage, technical/social meeting. Abe Rubenstein, Ext. 0725.

China-Burma-India Vets Assoc.: Tuesday, Sept. 27, 1983, 5 p.m., Plant 28A, business meeting, guest speaker BASHA Commander's report on Las Vegas reunion. Ray Fong, Ext. 2484.

Coin Club: (Bethpage) Wed., Sept. 14, Plant 25 vendor conference rooms, 12:05 p.m. Informal lunchtime meeting. Grumman employees welcome. K. Hale, Ext. 1825

Computer Club: 1st working Monday of every month, Recreation bldg., 5 p.m. Computer Demo/Lectures. Guests welcome. P. Frumkin, Ext. 5134/J. Hayne, Ext. 4945

Corvette Club: 1st Tuesday of every month, 5 p.m., Plant 28A. 1st Annual Picnic, Sunday, Sept. 18, Tobay Beach, 12:00 p.m. Guests welcome. C. Mazzara, Ext. 9053

French Club: Wed., Sept. 13, 108 N. Windhorst Rd., Bethpage, 5:30 p.m. French readings and conversation. Guests welcome. M. Mirpuri, Ext. 3635

GACE Flying Club: Monday, Sept. 19, 5:15 p.m., Cosmopolitan at Republic Airport, Route 110, regular monthly membership meeting. Picnic at McKay Field is slated for Sept. 26, 5:30 p.m. Tickets are $6. Contact C. Lloyd, Ext. 0485/E. Neves, Ext. 8887 for tickets.

Grumman Disabled American Vets Club: Wednesday, Sept. 21, 4 p.m., Pl. 3 cafeteria, business meeting, all disabled vets are welcome. Ogeous Lewis, Ext. 4476.

Grumman Family Campers: September 23-25, Nassau Beach Park; October 21-23, Hempstead Harbor, guests welcome. Bruce Ingersoll. Ext. 117-7475; Lou DeTurris, Ext. 6855.

Institute of Environmental Sciences: Sept. 22, 6 to 9 p. m. Cocktails/dinner/speaker, Antun's in Hicksville, "Random vibration testing, The need for it. . .and concepts," by Tom Fiedler. Joe Arcas, Ext. 5786.

NYSSPE: Sept. 11, 12 noon, Hoyt Farm Town Park. picnic (in Commack on New Highway). Warren Lipman, Ext. 2595.

scorecard

Tipping the scales

The Grumman varsity softball team won its first "one-pitch" tournament by beating the Scales of Justice two games out of three.

The tournament drew 26 teams to Long Island's Eisenhower Park on July 29, 30 and 31. By the rules, each batter gets one pitch. If it's a strike or he fouls it off, the batter is out. If the pitch is a ball, the batter takes his base. Other than that, the game is good, old-fashioned softball.

The team hit an average .458. Bob Beattie, the tournament's MVP, led the Grumman attack. He hit .652, getting 15 hits in 23 official trips to the plate. He drove in 13 runs, scored another 13, belted four home runs and drew eight walks.

Bill Ostrosky, playing in six of the eight games, hit .647 and Mark Cleary hit .632, also in six games.

The team's top run producer was Nick Catania. In just five games he drove in 17 runs. And pitcher Tom Marion, on the mound in all eight games, helped his own cause by driving in 12 of the team's 95 runs.

"The guys had a lot of fun playing in this tournament," said coach Joe Cavalluzzo, "and it did a lot of good for us by winning it." Since there is no industrial regional tournament this year, the one-pitch tourney was the warm-up for the nationals. The team was scheduled to return from the Nationals, held in Moultrie, Georgia, on September 6.

Harvest time

Show the world that you've beaten the elements to raise the biggest, tastiest veggies in history. Enter your prize produce in the Grumman Garden Forum's Fall Show, set for Thursday, September 15 in Plant 35.

Your local Employee Services office has copies of the rules and competition categories.

Flying saucers!

Those discs you may have seen flying around Plant 35 on August 3 weren't being flown by aliens from outer space. They were Frisbees, flung by Grummanites.

In the annual Frisbee tournament, Ellen Pierce outdistanced all the other women: Gene Cribben was the men's distance champ. Men and women competed against each other in the accuracy event and top prizes went to Dave Seeman and Dave Mendocha.

The best shots in town

You wouldn't want to face any of these folks on Main St. at high noon. They're members of the Grumman Varsity Centerfire and .22 pistol teams. The two teams won their Long Island Industrial championships this year.

The champs are (above, L to R): Ron Trenckner, Joe Rosner, .22 team captain George Capua, Dick Van Valkenburgh, Morton Weinberg, Rick Appio, Dave Rice, Joe Garman, Bernard Boyle, Steve Kane, Bob Owen, centerfire captain Howard Leibman and Ed Kovacs. Calverton members (below L to R) are: Whitey Northridge, Doug Crooks, Barbara Scesny and Tony Scesny.

Just a hobby?

Then there's probably a category for you to enter in the annual Recreation Hobby Show in Plant 28A.

Entries will be accepted Monday, Tuesday and Wednesday, October 10 through 12. Entries will be displayed on Thursday and Friday, October 13 and 14. Awards — first, second and third place ribbons and a $100 Bond for Best-of-Show — will be presented on Friday, October 14.

There are 20 categories to enter, all the most popular hobbies from ceramics to woodworking. Grummanites in Bethpage can get copies of the rules and regs from Ellen Drasser, Recreation, Ext. 2133. The person to contact in Calverton is Barbara Homrighouse, Ext. (117) 6519; in Great River, call Cheryl Hirsch, Ext. (113) 6047.

Right down the middle

Paul Langhauser of Plant 5 put one right down the middle of the 180-yard seventh hole on the Blue Course at Bethpage State Park for a hole-in-one. The momentous moment took place on July 22.

Some racquet

The Grumman varsity tennis teams are looking for a one-two sweep of the Long Island Industrial Recreation Tennis League.

At the season's midpoint, the "A" team boasts the only undefeated record in the division. The Grummanites' 6-0 record gives them a comfortable cushion against Sperry, at 4-1.

But Sperry doesn't have the same cushion against the Grumman "B" team, in third place and closing with a 4-2 record.

If you shoot baskets

Tryouts begin next month for the Grumman varsity basketball team. The trials will be held at the Levittown Presbyterian Church on Wantagh Avenue every Tuesday and Thursday during October from 5 to 7 p.m.

The intramural season is starting soon too. An organizational meeting for team captains will be held on Wednesday, September 22, in Plant 28A at 5 p.m. Captains should bring their team rosters, listing each player's name, permanent number and department.

If you want to play but don't belong to any team, just call Recreation, Ext. 2133.

Aerobics begin

The new Grumman Aerobic Club will have its first meeting on September 12 in Plant 28A.

The club plans to meet every Monday and Friday from 5:30 to 6:30 p.m. The class on September 12 will be free. Details of the monthly membership fee will be given at that time.

If you want more information, call Recreation, Ext. 2133/2269.

Take a break

On the weekend of December 9-11, enjoy yourself in Woodloch Pines, in Hawley, Pennsylvania.

Prices range from $181 to $215 per person, depending on the accommodations you choose. Included in the package are motorcoach transportation, two nights' accommodations, and five meals, and many activities are available for your enjoyment.

If you're looking to have a great New Year's Eve, Recreation has already done the planning for you. They've got a December 30-January 1 trip planned to Pleasantview Lodge in Freehold, New York. Included in this package are four meals, the New Year's Eve party and much more. The price is $154 per person, double occupancy.

Prepare now for both of these popular Grumman trips. Reservations have to be made by early October.

You can get additional information from Recreation, Ext. 2133, Plant 28A.

On the right track

Grumman Recreation is forming a varsity running team to represent the company at Tri-State events.

There are openings for men, women and master runners. These positions are for the 1984 racing season. The team roster will be limited to 35 runners; tryouts will be held yearly at the completion of the summer racing series. Eligibility is based on performance in any certified 5K to 10K event run during 1983.

If you are interested in joining, contact team managers Irwin Solomon, Ext. 115-3411 or Pat Masterson, Ext. 3643.

Select circle. *Prizes and trophies in Recreation's golf tourney are given out during the buffet held after the tournament.*

Kalman and Wright pace golf tournament

The annual Recreation Golf Championship and Kickers tournament has been drawing crowds of competitors for more than two decades. Again this year, on August 9, 144 Grummanites put their swings to the test on the tough Pine Hills Country Club course in Manorville, Long Island.

After the last putt was made and the cards were signed, Steve Kalman's 73 and Caroline Wright's 107 made them the best male and female golfers in the tournament.

The rest of the 18 trophy went to: Low Gross-Seniors: Tony Uravitch, 77; Low Net-Men: Jerry Stephens, 89-30=59; Low Net-Seniors: Ed Charland 91-36=55; Low Net-Women: Joan Pavlat, 108-38=70; Low Net-Callaway: Don Walker, 77-6=71; Second Low Gross-Men: Doug Keuling, 80; Second Low Gross-Seniors: Mark Guss, 80; Second Low Gross-Women: Fran Smith, 116; Second Low Net-Men: Mike Martin, 83-23=60; Second Low Net-Seniors: Vito Farinola, 81-18=63; Second Low Net-Women: Marie Smith, 117-46=71; Second Low Net-Callaway: Bill Rehm, 90-16=74; Longest Drive-Men: Frank Schwartz; Longest Drive-Women: Caroline Wright; Closest to the pin-Men: Mark Guss, 2 ft 9 in.; Closest to the pin-Women: Marlyn Rehm, 20 ft.

Lily gathers top prize

A large turnout and the participation of many first-time exhibitors made this year's Summer Flower Show a success. The annual competition, sponsored by the Grumman Garden Forum, was held on July 28. At 11:30 a.m., Bill Voorhest, vice president of Security and Corporate Services, announced the winners in the 10 categories.

Marie Bennett from Great River won the Best-in-Show award; her first place lily out-bloomed the other first placers. Other winners were:

Lilies and day lilies: 1st - Marie Bennett, 2nd - Pete Mirabella, 3rd - Peg Hanak, Honorable Mention - Amy Blackwell.

Roses and min. roses; 1st - Blackwell, 2nd - Roy Goddard, 3rd - Ed Vasta, HM - Pam Sechrengost.

Gladiolus: 1st - Blackwell, 2nd - Dot Kappenburg, 3rd - Cliff Blackwell, HM - Sechrengost, Special - Bennett.

Novice: 1st - Tom Trifaro, 2nd - Sechrengost, 3rd - Hanak, HM - Louise Dellaposta, Spec. - Lillian Gorlitz, Spec. - Ray Perticaro.

Arrangements: 1st - Cathy Struble, 2nd - Betty McLean, 3rd - George Rath, HM - Blackwell, Spec. - Kappenburg.

Single seasonal bloom: 1st - Blackwell, 2nd - Armand Aronne, 3rd - Kappenburg, HM - Bennett, Spec. - Karl Hagen, Spec. - Dellaposta, Spec. - Tom Cummiskey.

Seasonal collection: 1st - Aronne, 2nd - Kappenburg, 3rd - Blackwell, HM - Sechrengost, Spec. - Marilyn Duffy, Spec. - Bill Pietruzewicz.

Small houseplants: 1st - Lillian Fink, 2nd - Jan Anders, 3rd - Connie Rom.

Large houseplants: 1st - Pete Sicardi, 2nd - Tom Cummiskey, 3rd - Ellen Smith, HM - Ed Vasta, HM - Grace Lamberson, Spec. - Jack Patton.

Houseplants (hanging baskets): 1st - Smith, 2nd - Blackwell, 3rd - Pietruzewicz, HM - Cummiskey, Spec. - Janette Friedman.

Entry prizes: Robin Frenzel; Margaret Sanfilippo.

Tops in taps. *Ten members of the Grumman Taphatters entertained the residents of the Sunrise Manor Nursing Home in Bayshore. They got rave reviews; the senior citizens want a repeat performance. If you are interested in joining the troupe, contact club president Pat Tropea, Ext. 2260.*

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